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To the Board of Directors of
The Cleveland Chamber of Commerce.

Gentlemen: Your committee on education respectfully submits the following report upon the present status of industrial education in the Cleveland public school system and elsewhere, together with certain recommendations for further progress in Cleveland.

The term "industrial education" has, we found, a rather confusing variety of significance. For our purpose, we assume education to be divided into two main classes—academic or general education, and vocational education. Vocational education we understand to mean all preparation for productive labor. We have confined ourselves to the consideration of that vocational education which prepares for wage earning in the shop or factory. This we have considered under two heads:

(1) "Pre-vocational education" in mechanics, general manual training, etc., which prepares the pupil for later training in his chosen occupation;

(2) Actual training of prospective wage earners in shop or factory practice, conducted for the most part in distinct "trade schools."

Both of these are included in the term "industrial education." In this report we shall distinguish the two divisions of industrial education by the terms "pre-vocational education" and "trade training."

In most of our American public school systems, industrial education has progressed no further than the pre-vocational courses conceded to be useful in any industrial vocation.

Your committee finds, after corresponding with the educational authorities in the other ten largest cities of the United States, that Cleveland is providing as much pre-vocational education as any of these cities. Further, we find that among persons who have been making a study of this subject and are best informed, Cleveland is recognized as being in the front rank of American municipalities in this regard. In the elementary grades of our public schools drafting and simple tool work is taught to the boys in the fifth and sixth grades in the school room, while more advanced work is taught in the seventh and eighth grades by special teachers in school centers. Domestic science for girls begins in the fifth and sixth grades; simple and useful things are made, and sewing is taught by special teachers. Drawing and applied art, including free hand drawing, designing and instruction in the making of simple articles, is taught in the kindergarten, elementary schools, industrial schools and high schools as a unit from the kindergarten through high school. The technical high schools are chiefly designed to prepare pupils for supervisory or

minor executive positions in industry; they offer advanced courses in drafting and pattern-making, as well as classes in forging, foundry and machine shop practice, etc., and opportunity to specialize in chemistry, electrical construction, auto repairing, printing, agriculture, designing, cartooning, etc.

On the other hand, Cleveland has not established any separate trade schools to train prospective wage earners in actual shop or factory practice, with the aim of fitting graduates for immediate employment as skilled workmen. In Germany notably, many such schools have been established; and New York, Philadelphia, Boston, Pittsburgh and Detroit, among the larger American cities, have established a few trade schools. Usually, in the best of such schools, courses are arranged under actual shop conditions and the pupils are engaged in making saleable products.

Scarcely more than one hundred years ago the idea that a legal or medical education should be obtained in a school or college would have been deemed ridiculous. Today such an education is practically required before the State will allow anyone to practice law or medicine. Schools of agriculture are flourishing; schools of journalism have proved a success; and schools of business administration are being founded. There is evidently a decided tendency toward the ultimate establishment of public schools providing apprenticeships for practically all vocations.

In view of the fact that out of the millions of children who enter the elementary grades of our schools at the age of six, less than one out of every four ever receives the benefit of high school training, we have been impressed with the necessity of making better provision for the pupils who will enter our industries as wage earners, by providing courses that will interest and hold these boys and girls until they receive enough educational equipment to make them productive and self-reliant. Certainly the fundamental educational duty of the community to the child is to fit him to become an independent, useful citizen; and to that end he must first be able to earn his living.

Brownell School has been converted into an elementary industrial school, with quite complete equipment. It completed its fourth successful year in May, 1913. It is not a trade school, but is used for the education of certain children of a class which has come to be known in educational circles as "hand-minded" or "motor-minded" children, who acquire mental education best through the use of their hands. It is very evident that if the interest of children with this kind of mind is to be maintained, they must be allowed to engage in such school occupations as pattern-making, wood-working, etc., which have a far greater attraction to them than lessons in the purely academic courses. And if this interest is maintained and nurtured, there is reason to believe that the child will be stimulated to pursue higher courses of study.

An extension of industrial education would undoubtedly benefit this class of children, which is acknowledged to include no inconsiderable proportion of all our pupils.

The belief is held by some of our leading educators that our public schools should ultimately afford to prospective wage earners an opportunity to gain practical experience as well as theoretical knowledge of their trades.

We have conferred with some of our prominent manufacturers as well as educators, on this question. Some of them have the opinion that if a child is taught the right principles of character and if he learns to use his mind in school, he is better fitted to enter the shop or factory where he may learn a trade than if the attempt had been made to teach him the trade in the school room. It is also suggested that in America trades are not passed from father to son, as in Germany, and that therefore it is inexpedient to teach a child a trade which he may not follow; that with the modern development of machines, the skilled mechanic is becoming less and less required; and that in an industrial center which has so many diversified industries as Cleveland it would be practically impossible to establish enough schools to teach all trades. On the other hand, some educators and manufacturers who have given the subject much thought, believe that trade training is most desirable, and must be given by the public sooner or later.

Of course financial difficulties confront every proposal for any extension of our educational system; and for that reason if for no other, the establishment of separate schools in Cleveland for the purpose of teaching particular trades seems certainly not practicable in the near future. Your sub-committee believes, however, that the progress of other states and cities along this line should be carefully noted, and the means used to promote the capacity of their school children as future wage earners, not only in the interest of the children, but also for aiding in the successful operation of their industries, should receive thoughtful consideration by The Cleveland Chamber of Commerce.

The State of New Jersey has made provision for the establishment of vocational schools by appropriating a fund equal to that which is raised by the local district for tools, machinery, appliances and operation, provided the amount for any school does not exceed $10,000.

Wisconsin, noted for its progress in educational matters, has provided for state and local boards of industrial education, consisting of three employers, three employes, and three practical and eminent educators; two-thirds of their number thus consisting of men actually and practically engaged in industry; and the community sees to it that the schools adapt themselves to the interests of those engaged in the particular industries of each dis-

trict. In the words of the law, the schools are established "to instruct young persons in industrial arts and occupations—and to give such instruction as will lead to a fair knowledge of the liberal arts, a just and intelligent appreciation of the nobility and dignity of labor, and in general to promote diligence, economy, efficiency, honor and good citizenship." In support of this law, the state appropriates toward the maintenance of schools throughout the state a sum equal in each case to one-half the amount expended in any school, up to $3,000, and not to exceed $10,000 for any one community—this appropriation made with the understanding that the school has been maintained in a satisfactory manner for not less than eight months.

In 1913 Indiana passed a law reimbursing the local communities which had applied a plan for carrying on and increasing vocational education, by the payment of an amount equal to two-thirds of the salary of each teacher giving instruction in vocational subjects.

New York in 1910 passed an act establishing a system of state-conducted vocational schools under the administration of state and local boards of education throughout the state.

Ohio has not yet actively exerted itself in this branch of education.

Your committee believes the most feasible plan for immediate progress in industrial education in Cleveland is to add, from time to time, to the present pre-vocational courses in the elementary grades. The principals of both our Technical High Schools say there is no reason why many of the courses in mechanical drawing, wood-working, etc., which are now taught in the first two years in the Technical High Schools, should not be taught in the seventh and eighth grades of the elementary schools; some of the pre-vocational courses now taught in the seventh and eighth grades could then be taught in the fifth and sixth grades. This would furnish some of those who quit school before or at the completion of the elementary grades a better knowledge of shop and factory work, and also make it possible to extend the work in some of the higher courses in the Technical High Schools.

At present there is equipment in only a few Cleveland public school buildings for even the rudimentary manual training furnished in the elementary grades, and the pupils of most schools must go from their own schools to these few for classes in these courses. It would seem wise to provide each school building with a manual training shop in order that lessons in this subject may be given without requiring children to make trips to distant buildings.

Even these small steps in advance, however, will require a considerable expenditure for construction, equipment and operation. The Board of Education is not now able even to house

properly the children already attending the schools; and our proposal, we believe, would largely increase the attendance.

In view of all these facts, and in view of the further fact that our information as to the administration of the schools, both educational and financial, is not sufficient to enable us to make definite and specific recommendations for immediate extension of industrial education, your committee confines itself to the following recommendations:

(1) That instruction in pre-vocational courses, as now offered in the higher grades of the elementary schools and the first two years of the Technical High School courses, should be introduced in lower grades of the public schools from time to time as the means can be made available; provided, however, that the present degree of efficiency of instruction in fundamental and essential courses now taught in these grades, be not thereby impaired.

(2) That The Cleveland Chamber of Commerce continue on the alert for information as to the progress of other states and cities in the establishment and conduct of trade schools for actual shop and factory practice, so that the experience of pioneers in this field may be made promptly available in the consideration, from time to time, of the advisability of similar schools for Cleveland.

(3) We further recommend to your board that in the near future you refer to such committee as may be deemed best qualified, the task of studying the present methods of school administration and finance, with a view to recommending ways and means by which the rapidly developing needs of our public school system may be adequately met.

Respectfully submitted,

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